

REMARKS

Reconsideration of the pending application is respectfully requested on the basis of the following particulars.

1. Priority documents

Acknowledgement of receipt by the Office of the certified copy of the foreign priority document on January 26, 2004 is respectfully requested in the next Office communication.

2. In the claims

As shown in the foregoing AMENDMENT TO THE CLAIMS, the claims have been amended to more clearly point out the subject matter for which protection is sought.

A. Claim amendments

Claims 1-22 remain canceled.

Claim 23 is amended to clarify that distinct material strips are fastened together, that the method comprises guiding at least a corrugated material strip along at least one pressing device, that a set of movable pressing parts is provided and that use is made of magnetic forces provided by at least one permanent magnet. It is respectfully submitted that no new matter is added, since the changes merely correct minor informalities and adopt suggestions provided in the Office action, and support for the amendments is clearly found in Figs. 1 through 9 of the pending application and at least on page 4, lines 24-31, page 5, lines 4-12, and 24-29, page 6, lines 12-26, page 10, lines 6-10 and line 27 through page 11, line 2, and page 11, lines 30-21 of the accompanying description in the specification.

Claim 24 is amended to clarify that the magnetic forces provide the only pressing force during the pressing on step. It is respectfully submitted that no new matter is added, since support for the amendment is clearly found in Figs. 1 through 9

of the pending application and at least on page 5, lines 4-6 of the accompanying description in the specification.

Claim 25 is amended to be consistent with amended claim 23. It is respectfully submitted that no new matter is added since the change only corrects a minor informality.

Claim 26 is left unchanged.

Claim 27 is canceled.

Claim 28 is amended to clarify that the magnetic forces are at least provided by two permanent magnets, one of which is in contact with the movable pressing part. It is respectfully submitted that no new matter is added, since support for the amendment is clearly found in Figs. 1 through 9 of the pending application and at least on page 5, lines 24-29 of the accompanying description in the specification.

Claim 29 is amended to clarify that the magnetic forces are at least provided by a magnetic attraction between the support element and the pressing parts, and to be consistent with amended claim 23. It is respectfully submitted that no new matter is added, since support for the amendment is clearly found in Figs. 1 through 9 of the pending application and at least on page 12, lines 9-14 of the accompanying description in the specification.

Claim 30 is amended to be consistent with amended claim 31. It is respectfully submitted that no new matter is added since the change merely corrects a minor informality.

Claim 31 is canceled.

Claims 32-44 remain withdrawn.

Entry of the AMENDMENT TO THE CLAIMS is respectfully requested in the next Office communication.

B. Rejection of claims 23-31 under 35 U.S.C. § 112 second paragraph

Reconsideration and withdrawal of this rejection is respectfully requested, in view of the amendments to the claims, on the basis that the amended claims are clear and definite.

With respect to claim 23, the word different has been replaced with the word distinct. Thus, it is clear to a skilled artisan that the material strips are distinct from each other and may be formed from the same or different materials, with the only requirement being that the material strips are distinct.

With respect to claim 23, the series of movable press-on parts has been replaced with a set of pressing parts as suggested in the Office action.

With respect to claim 24, the claim has been amended to clarify that the magnetic forces provide the only pressing force during the pressing-on step. This recitation is clearly limited to the pressing-on step, and not to any other step in the process.

Regarding claims 28 and 29, the word realized is replaced by the word provided in order to clarify that the magnetic forces are at least provided by a magnetic attraction between the specifically recited elements.

Accordingly, the amended claims are clear and definite and withdrawal of this rejection is respectfully requested.

3. Rejection of claim 31 under 35 U.S.C. § 102(b) as being anticipated by U.S. patent no. 5,129,980 (Sissons)

This rejection is rendered moot by the cancellation of claim 31.

Accordingly, withdrawal of this rejection is respectfully requested.

4. Rejection of claims 23, 27, and 29-31 under 35 U.S.C. § 102(b) as being anticipated by or in the alternative under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 5,303,440 (*Zimmer*)

Reconsideration of this rejection is respectfully requested, in view of the amendments to claim 23 and the cancellation of claim 27, on the basis that the *Zimmer* patent fails to disclose each and every limitation of amended claim 23. The remaining claims depend from claim 23, and are therefore patentable as containing all of the limitations of claim 23, as well as for their respective recited features.

The *Zimmer* patent fails to disclose a method for manufacturing corrugated board, wherein distinct material strips are fastened together by a bonding agent and including guiding at least a corrugated material strip along at least one pressing device having a set of pressing parts wherein pressing for the pressing parts is provided by magnetic forces which are provided by at least one permanent magnet, as required by amended claim 23.

The embodiment of amended claim 23 requires a method of forming corrugated board by guiding at least a corrugated material strip along a pressing device having a set of pressing parts wherein pressing for the pressing parts is provided by magnetic forces which are provided by at least one permanent magnet.

In contrast, the *Zimmer* patent discloses a process in which a web, not a corrugated material, is guided along a pressing device in which pressing force is applied on the web by means of electromagnetic forces. Further, the pressing device of the *Zimmer* patent is formed between two rollers which have contiguous surfaces. The magnetic forces may be varied by provided selectively and mutually independently adjustable or parallelly controllable magnetic field units within the roller (col. 7, lines 32-37). While the *Zimmer* patent does disclose the use of permanent magnets, their use is disclosed only as a supplement to the use of electromagnets that form the pressing parts (col. 8, lines 51-65).

Accordingly, the *Zimmer* patent fails to disclose a method for manufacturing corrugated board, wherein distinct material strips are fastened together by a bonding

agent and including guiding at least a corrugated material strip along at least one pressing device having a set of pressing parts wherein pressing for the pressing parts is provided by magnetic forces which are provided by at least one permanent magnet, as required by amended claim 23 and withdrawal of this rejection is respectfully requested.

5. Rejection of claims 23-27, 29, and 30 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 5,129,980 (*Sissons*) in view of U.S. patent no. 5,303,440 (*Zimmer*)

Reconsideration of this rejection is respectfully requested on the basis that the rejection fails to establish a *prima facie* case of obviousness with respect to claims 23-26, 29, and 30. This rejection is rendered moot with respect to claim 27 with the cancellation of claim 27.

- A. The cited references do not disclose or suggest every claimed limitation

Reconsideration of this rejection is respectfully requested on the basis that the rejection fails to establish a *prima facie* case of obviousness with respect to claims 23-26, 29, and 30 because the cited references fail to disclose or suggest every limitation of pending claim 23.

The *Sissons* patent fails to disclose a method for manufacturing corrugated board including a set of pressing parts wherein the pressing for the pressing parts is provided by magnetic forces which are provided by at least one permanent magnet, as required by amended claim 23.

In the description, the *Sissons* patent is identified as the closest prior art. As discussed in the specification, the use of springs for applying the pressing force has the disadvantage that frictional forces may be created between the spring and the guide around which this spring is provided, as a result of which the movable element may become jammed. Moreover, such friction causes wear, as a result of which cracks and the like may occur. Due to said wear, as well as due to the vibrations

which are generated in such a spring, it will also be subject to ageing. Because of this friction, which is often variable, and as a result of the above-mentioned other factors, it is often difficult to ensure a permanent pressing force, which can have a negative effect on the quality of the produced end product, e.g. irregular gluing, a bad bonding, unwanted impression marks in the cardboard. Further, the use of springs requires regular maintenance of the pressing device.

The embodiment of the pending claims overcomes these disadvantages, and is achieved by using magnetic forces of at least one permanent magnet for applying the pressing force on the corrugated material strip. For holding the permanent magnet in place, no guide is required as is the case with the spring in the prior art. As a result, there can be no friction between the permanent magnet and such a guide, since the latter is not present. Consequently, the magnet is substantially not subjected to friction, does substantially not wear and requires substantially no maintenance.

Turning to the *Zimmer* patent, as discussed above, the *Zimmer* patent fails to disclose a method for manufacturing corrugated board, wherein distinct material strips are fastened together by a bonding agent and including guiding at least a corrugated material strip along at least one pressing device having a set of pressing parts wherein pressing for the pressing parts is provided by magnetic forces which are provided by at least one permanent magnet, as required by amended claim 23.

Therefore, it is clear that neither the *Sissons* nor the *Zimmer* patent discloses the use of magnetic forces, provided by permanent magnets, for providing the pressing force to a set of pressing parts, as required by amended claim 23.

Thus, the combination of the *Sissons* and the *Zimmer* patents fails to disclose every limitation of amended claim 23. Accordingly, a *prima facie* case of obviousness cannot be maintained and withdrawal of this rejection is respectfully requested.

B. There is no motivation to combine the cited references

Reconsideration of this rejection is respectfully requested on the basis that the rejection fails to establish a *prima facie* case of obviousness with respect to claims 23-26, 29, and 30 because there is no suggestion or motivation to combine the cited references.

As discussed above the *Zimmer* patent relates to a process in which electromagnets are used, which may become heated to high temperatures during operation as a result of the electric currents flowing through the coils. Such heat would be undesirable in a process for manufacturing corrugated board in view of the risk that the material might become charred or burnt, or that the corrugated material strip may become delaminated.

Accordingly, a skilled artisan would not have been motivated to provide the electromagnets of the *Zimmer* patent to the pressing parts of the *Sissons* patent, due to the risk that such a combination would damage the corrugated material of the *Sissons* patent.

Thus, because a skilled artisan would not have been motivated to combine the cited references, a *prima facie* case of obviousness cannot be maintained, and withdrawal of this rejection is respectfully requested.

C. There is no reasonable expectation of success

Reconsideration of this rejection is respectfully requested on the basis that the rejection fails to establish a *prima facie* case of obviousness with respect to claims 23-26, 29, and 30 because there is no reasonable expectation of successfully combining the cited references.

Even if a skilled artisan did combine the teachings of the *Sissons* and the *Zimmer* patents, there is no reasonable expectation that such a combination would be successful since the magnetic forces which are developed in the device of the *Zimmer* patent are much too strong to be applied as a pressing force on the corrugated material of the *Sissons* patent. In the *Zimmer* patent, the purpose of the electromagnetic force

is to apply a liquid to a flat web of material. In order to obtain this efficiently, a high degree of pressing force needs to be exerted on the flat web. On the other hand, in the process of the *Sissons* patent and the embodiment of the pending claims, the pressing force needs to be limited in view of the fact that a corrugated material strip is treated and crushing needs to be avoided. Thus combining the teachings of the *Zimmer* patent with that of the *Sissons* patent would lead to a process in which the corrugated material strip is crushed and possibly burnt by the pressing device.

Accordingly, since there is no reasonable expectation of successfully combining the teachings of the *Sissons* and the *Zimmer* patents, a *prima facie* case of obviousness cannot be maintained and withdrawal of this rejection is respectfully requested.

6. Rejection of claim 28 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 4,948,467 (*Creagan*) in view of U.S. patent no. 5,129,980 (*Sissons*)

Reconsideration of this rejection is respectfully requested on the basis that the rejection fails to establish a *prima facie* case of obviousness with respect to claim 28.

- A. The cited references do not disclose or suggest every claimed limitation

Reconsideration of this rejection is respectfully requested on the basis that the rejection fails to establish a *prima facie* case of obviousness with respect to claim 28 because the cited references fail to disclose or suggest every limitation of pending claim 23.

As discussed above, the *Sissons* patent fails to disclose every limitation of amended claim 23.

Similarly, the *Creagan* patent fails to disclose a method for manufacturing corrugated board, wherein distinct material strips are fastened together by a bonding agent and including guiding at least a corrugated material strip along at least one pressing device having a set of pressing parts wherein pressing for the pressing parts

is provided by magnetic forces which are provided by at least one permanent magnet, as required by amended claim 23.

Instead the *Creagan* patent discloses nip press for removing water from a paper web (abstract). The *Creagan* patent discloses not a set of pressing parts, but rather a continuous belt that presses against the web of paper. While the web is a magnetic material, the pressing force is provided by the electromagnetic coil 30.

Therefore, it is clear that neither the *Sissons* nor the *Zimmer* patent discloses the use of magnetic forces, provided by permanent magnets, for providing the pressing force to a set of pressing parts, as required by amended claim 23.

Thus, the combination of the *Creagan* and the *Sissons* patents fails to disclose every limitation of amended claim 23. Accordingly, a *prima facie* case of obviousness cannot be maintained and withdrawal of this rejection is respectfully requested.

B. There is no motivation to combine the cited references

Reconsideration of this rejection is respectfully requested on the basis that the rejection fails to establish a *prima facie* case of obviousness with respect to claim 28 because there is no suggestion or motivation to combine the cited references.

Similarly as discussed above, the *Creagan* patent relates to a process in which electromagnets are used, which may become heated to high temperatures during operation as a result of the electric currents flowing through the coils. Such heat would be undesirable in a process for manufacturing corrugated board in view of the risk that the material might become charred or burnt, or that the corrugated material strip may become delaminated.

Accordingly, a skilled artisan would not have been motivated to provide the corrugated board of the *Sissons* patent to the process of the *Creagan* patent, due to the risk that such a combination would damage the corrugated material of the *Sissons* patent.

Thus, because a skilled artisan would not have been motivated to combine the cited references, a *prima facie* case of obviousness cannot be maintained, and withdrawal of this rejection is respectfully requested.

C. There is no reasonable expectation of success

Reconsideration of this rejection is respectfully requested on the basis that the rejection fails to establish a *prima facie* case of obviousness with respect to claims 28 because there is no reasonable expectation of successfully combining the cited references.

Similarly as discussed above, Even if a skilled artisan did combine the teachings of the *Creagan* and the *Sissons* patents, there is no reasonable expectation that such a combination would be successful since the magnetic forces which are developed in the device of the *Creagan* patent are much too strong to be applied as pressing force on the corrugated material of the *Sissons* patent. In the *Creagan* patent, the purpose of the electromagnetic force is to remove a liquid from a flat web of material. In order to obtain this efficiently, a high degree of pressing force needs to be exerted on the flat web. On the other hand, in the process of the *Sissons* patent and the embodiment of the pending claims, the pressing force needs to be limited in view of the fact that a corrugated material strip is treated and crushing needs to be avoided. Thus combining the teachings of the *Creagan* patent with that of the *Sissons* patent would lead to a process in which the corrugated material strip is crushed and possibly burnt by the pressing device.

Accordingly, since there is no reasonable expectation of successfully combining the teachings of the *Creagan* and the *Sissons* patents, a *prima facie* case of obviousness cannot be maintained and withdrawal of this rejection is respectfully requested.

7. Conclusion

As a result of the amendment to the claims, and further in view of the foregoing remarks, it is respectfully submitted that the application is in condition for allowance. Accordingly, it is respectfully requested that every pending claim in the present application be allowed and the application be passed to issue.

If any issues remain that may be resolved by a telephone or facsimile communication with the applicant's attorney, the examiner is invited to contact the undersigned at the numbers shown below.

BACON & THOMAS, PLLC
625 Slaters Lane, Fourth Floor
Alexandria, Virginia 22314-1176
Phone: (703) 683-0500
Facsimile: (703) 683-1080

Date: April 10, 2007

Respectfully submitted,

/Justin J. Cassell, Reg. #46,205/

JUSTIN J. CASSELL
Attorney for Applicant
Registration No. 46,205